

DETAILED ACTION

1. Receipt is acknowledged of the amendment filed on March 11, 2008, which has been fully considered in this action.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 16, 17, 19-26 and 28 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by WO 200153675.

WO 200153675 discloses an atomization system for a fuel comprising all the featured elements of the instant invention, note connecting tube 22; a low pressure fuel injector 26; an atomization point at 16; and an additional tube 20 for supplying the temperature-adjusted substance stream which can be air or water vapor.

4. Claims 16, 20, 22, 27, 28, 30 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Sheather.

Sheather discloses an atomization system for a fuel comprising all the featured elements of the instant invention, note specifically connecting tube 12 with a plurality of atomization points 19/20; metering device 15 at metering point 16; and additional tube 14.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sheather.

Sheather discloses all the featured elements of the instant invention except for the fuel injector being inclined at a specific angle to an axis of the tube and connecting tube. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the fuel injector of Sheather at an inclined angle since such a modification would further enhance atomization and mixing in the chamber 13.

Response to Arguments

7. Applicant's arguments filed March 11, 2008 have been fully considered but they are not persuasive.

In response to applicant's arguments concerning WO 2001153675, note paragraph 3 above, and that applicant does not define in the specification or the claims what a "low pressure fuel injector" encompasses, and therefore is considered to be only descriptive and functional language and does not further limit the claim. Note that the nozzle in WO 2001152675 injects fuel into the connecting tube, therefore it is a "fuel injector", since no other limitations are recited further defining the fuel injector.

In response to applicant's arguments concerning Sheather, note that applicant does not define in the specification or the claims what a "low pressure fuel injector" encompasses, and therefore is considered to be only descriptive and functional language and does not further limit the claim. Note that the metering device 15 of Sheather is provided with a suitable valve for the regulation(i.e. metering) of the oil supplied(i.e. the fuel), and injects fuel into the connecting tube, therefore it is a "fuel injector", since no other limitations are recited further defining the fuel injector.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEVEN J. GANEY whose telephone number is (571)272-4899. The examiner can normally be reached on 9:00-5:00; Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on 571-272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven J. Ganey/
Primary Examiner
Art Unit 3752

sjg